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Initiating Factors

- · Smoke Inhalation
- · Lack of Exercise, Diet, Stress
- · Clinical and Subclinical Infections
- Hypertension
- Trauma

Cardiovascular Cell Activation

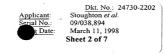
Free Radical Production Pseudopod Formation Adhesion Molecules Degranulation

- · Reduced Perfusion, Ischemia, Thrombosis
- · Leukocyte Infiltration, Immune Reaction
- Ox-LDL, oxidative stress
- · MI, Stroke, CV ischemia
- · Adult respiratory distress syndrome
- · Accelerated atheroscierosis, stenosis
- · Arthritis, organ transplant rejection
- · Alzheimer's
- · Diabetes, hypertension
- Venous insufficiency

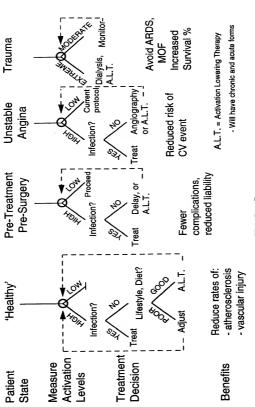
acute

chronic

FIG. I

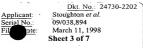






F16.2

CONTROL PRODUCTION



Serial No.

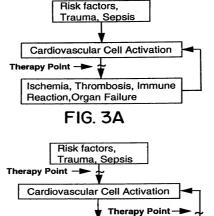


FIG. 3B

Ischemia, Thrombosis, Immune Reaction, Organ Failure

⁻¹G. 4



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> b = bovine h = hamster m = man o = other r = rat

> > p chymotrypsinogen A(14-15)

p chymotrypsinogen B(14-15)

b neochymo A autoactivation(147-9)

b neochymo B autoactivation(147-9)
b neochymo B autoactivation(148-9)

trypsinogen residue (human)

b chymotrypsinogen A sigtransduction

chymotrypsinogen A sigtransduction

h trypsinogen 2 peptide h trypsinogen 3 peptide

anionic trypsinogen activation peptide

cationic trypsinogen activation peptide cationic trypsinogen activation peptide

SR AR TNA NAL AL TPTDDDDDK FPLDDDDDK FPVDDDDDK APFDDDDDKI APFDDDDDK DDDDDK CGVPAIQPVLSGLSR **CGVPAIPPVLSGLSR** CGVPAIOPVLSGL CGVPAIPPVLSGLSR CGVPSIPPNLS **CGVPAIKPALBFB** MAFLWLVSCFALVGATFG MLRFLVFASLVLYGHS MIRALLLSTLVAGALS **CGYPTYEVQHDVSR** TODFPETNAR DFPETNAR CGLPANLPQLPR **CGDPTYPPYVTR** CGVSTYAPDMSR **FPVDDDDK** VDDDDK DSGISPR EEGISSR EAGLNSR GISPR **ENGISPR** EHP EHWSYGLRPG VHLSAEEKEA AGCKNFFWKTFTSC CYIQNCPRG CYIONCPLG HSQGTFTSDYSKYLDSRRAQDFVQWLMNT RPPGFSPFR

HSDGTFTSELSRLRDSARLORLLOGLV

ISDRDYMGWMDF SDNNQQGKSAQQGGY

ECG

Letter Key for peptide origin:

chymotrypsinogen B sigtransduction chymotrypsinogen B sigtransduction chymotrypsinogen C sigtransduction chymotrypsinogen D sigtransduction r chymotrypsinogen B sigtransduction proelastase 1 sigtransduction proelastase 2 sigtransduction proelastase 2 proelastase 1 r proelastase 1 p proelastase 2 m proelastase 2A m proelastase 2B p trypsinogen b trypsinogen m prophospholipase A2 p prophospholipase A2 b prophospholipase A2 o prophospholipase A2 (horse1) o prophospholipase A2 (horse2) m thyrotropin-releasing m gonadtropin-releasing m growth-hormone-releasing m somatostatin m vasotocin m oxytocin m glucagon m bradykinin m secretin m cholecystokinin-pancreozymin (C-terml)

FIG. 5A

m scotophobin m gluthatione

3.1

0.

100

30

APVD



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SYSMEHFRWGKPVGKKRRPVKVYPNGAEDELAEAFPLEF p adrenocotricotropin
SYSMEHFRWGKPVGKKRRPVKVYPNGAEDESAUAFPLEF m adrenocotricotropin
SYSMEHFRWGKPVGKKRRPVKVYPNGEAEDSAQAFPLEF b adrenocotricotropin
SYSMEHFRWGKPV
                                      m MSH
                                      p CRP-I (C-reactive protein)
DIGYS
SWESA
                                      p CRP-II (C-reactive protein)
                                      p CRP-III not reactive (C-reactive protein)
KPOLWP
LFEVPEVT
                                      p CRP-IV not reactive (C-reactive protein)
VGGSEI
                                      p CRP-V not reactive (C-reactive protein)
WDFV
                                      p CRP-VI (C-reactive protein)
                                      p CRP-VII (C-reactive protein)
NMWDFV
                                      m leukotaxin (no sequence order)
LVAGD
RKPVLYATNGSQDC
                                      m leukocyte promotion factor
SYSM
                                      m ACTH fragment
                                      o fMLP (chemotactic factor)
BMLF
                                      b chymotrypsinogen A (247-8)
TN
SHLVE
                                      o peptidetide cleaved by chymo C
                                      o peptidetide cleaved at brushborder
AKKK
AAAA
                                      o peptidetide cleaved at brsuhborder
KKKK
                                      o peptidetide cleaved at brushborder
                                      o peptidetide cleaved at brushborder
AKKKK
                                      o peptidetide cleaved at brushborder
KKKKK
                                      o peptidetide cleaved at brushborder
LWMRFA
                                      o peptidetide cleaved at brushborder
KKKKKK
VAAKIVG
                                      o peptidetide cleaved at brushborder
                                      o insulin B fragment
VCGE
                                      o insulin B fragment
LCGS
LVCG
                                      o insulin B fragment
                                      o neutrophil chemotactic peptide
ELR
FLRC
                                      o neutrophil chemotactic peptide
AELR
                                      o part of NAP-2
SSSGEHFEGEKVFHVNVEDENDIQ
                                      p pro-carboxypeptidase B
KEDFVGHQVLRISVDDEAQVQKVKEL
                                             p carboxypeptidase A activation
MAGRGGSRVLALCAALAAGGWLLAA r carboxypeptidase E signal peptide
KEDFVGHOVLRITAADEAEVO
                                      p pro-carboxypeptidase A
TTGHSYEK
                                      p cleavage procarboxypeptide B
SVLEAOFDSR
                                      p cleaved F4 procarboxpeptidase B
                                      p cleaved procarboxypeptidase B
HHDGEHFEGEKVFR
YVTR
                                      h proelastase
VVGG
                                      h proelastase 2
                                      h proelastase activation sequence
YVTR
AAPPRGR
                                      o profactor D fragment
                                      o profactor D fragment
APPRGR
STFWAYQPDGDNDPTDYQKYEHTSSPSQLLAPGDYPCVIE r CCK-releasing factor
GRGDSP
                                      o integrin endothelial (RGD)
GRGESP
                                      o integrin endothelial (RGE)
APGPR
                                      r enterostatin (gut)
                                      r enterostatin (pancreas)
vpgpr
FMRF
                                      o mulluscan cardioexcitatory
                                      r C-terminal glucagon pancreatic peptide
LRDRDDIA
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r glucagonoma precursor



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> r Thyrotropin Re Hormone h composition of aa gliadin h composition of aa gliadin o proglucagon

o preprogastrin, preproCCK

GLY o pancreatic peptide cleavage produce YPALPEAPGEDASPDDLSRYYASLRHYLDLVTRQRY o PYY (pancreatic peptide

YY) SYŚM YMEHFRW DRVYIHP VYIHPF RVYIHPI VIHN RPPGF RPPGFS RPPGFSP **PPGFSP** AGSE VGSE BMLFF **BMMM** VGDE YGGFLK YSGFLT YGGFMRF

YMGFP RGDS GRGDTP WMDF LRPG HTATFK SMEVRGW YPFVEPIH YPF YAFAY YRFK TRSAW RPKP **QQFFGLM FFGLM**

EHPG GGGPPS

GGGPPY

KRNRNNIA HRRQL

RKDVY DKWEL HKGKAR CVIKE FTPRL KOAGDV KEEAE

KYK FLEEI WHWLOL o adrenocorticotropin hormone fragment H o adrenocorticotropin hormone fragment H

p Angiotensin II fragment Angiotensin II fragment horse p Angiotensin III fragment

p Angiotensinogen fragment o bradykinin fragments 1-5 o bradykinin fragments 1-6

o bradykinin fragments 1-7 o bradykinin fragments 2-7

o chemotactic factor for eosinophils o chemotactic factor for eosinophils

o fMLP w/ Phe group o fMLP class

o fMLP class o leucine enkephalin lys o ser-leu enkephalin-thr

o met enkephalin arg phe o D-met, pro enkephalinamide o supports fibroblast attachment

o supports fibroblast attachment o CCK fragment 30-33

o leutenizing hormone fragment o alpha-melanocyte stimulatory hormone o delta-melanocyte stimulatory hormone

o beta-casomorphin

o beta-casomorphin fragment 1-3 o D-ala,tyr- fragment 1-5 amide o D-arg,lys fragment 1-4 amide

h hypercalcemia of malignancy factor

o substance P fragment 1-4 o substance P fragment 5-11 o substance P fragment 7-11 o thymopoietin II fragment 32-6

o U5 peptide

h C3a 72-77 fragment o hydra peptide fragment 7-11 o leukopyrokinin fragment 4-8

o RGD related peptide

o lys-thymosin alphal fragment

o responsible for nicks at purine in DNA r prothrombin precursor 5-9

o alpha1 mating factor fragment